PS3

Saif Ullah & Jonathan Masih — Part 1

(1) 1. Put Parameters in a place where the procedure can access them
2. Transfer control to the procedure
3. Acquire the storage resources needed for the procedure
4. Perform the desired task
5. Put the result in a place where the calling program can access it
6. Return control to the point of origin, since a procedure can be called from several points in a program

(2) 1. A procedure can have 4 arguments
2. Stored in registers $a0-$a3

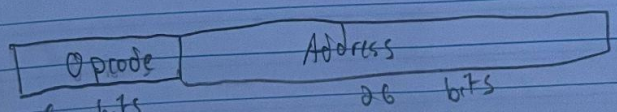
(3) 1. It can have 2 return values
2. Stored in registers $v0-$v1

(4) Additional registers can be stored into the stack and used after the procedure to store from the stack

(5) a) when the procedure is called using JAL
b) simultaneously saves the address of the following instruction in the register $ra
c) jr - $ used with $ra to return to the address

(6) Decreased

(7)



(8) a) Add 1 to increment byte
b) Add 4 to go to next word

(9) The memory that contains the local array will be used as soon as the procedure returns pointers to local variables can lead to choose

(10) Assembly language programs are not easily portable because of the many different architectures of current and future computers. Assembly language instructions differ depending on a computers architecture. Therefore, assembly code must be converted or updated to work with different or newer computer architectures